

UNIT II

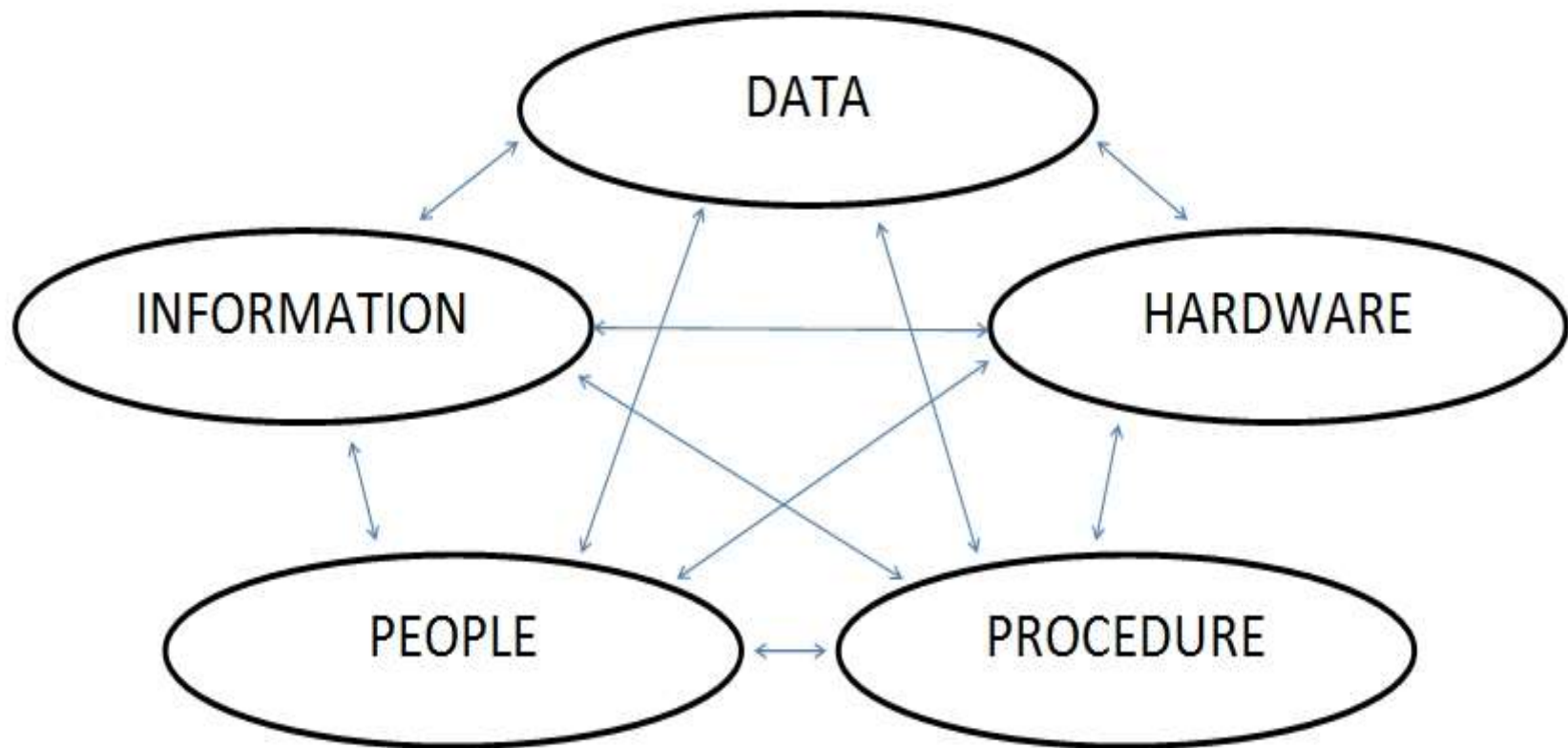
Management Information System (MIS)

Managing Information Systems

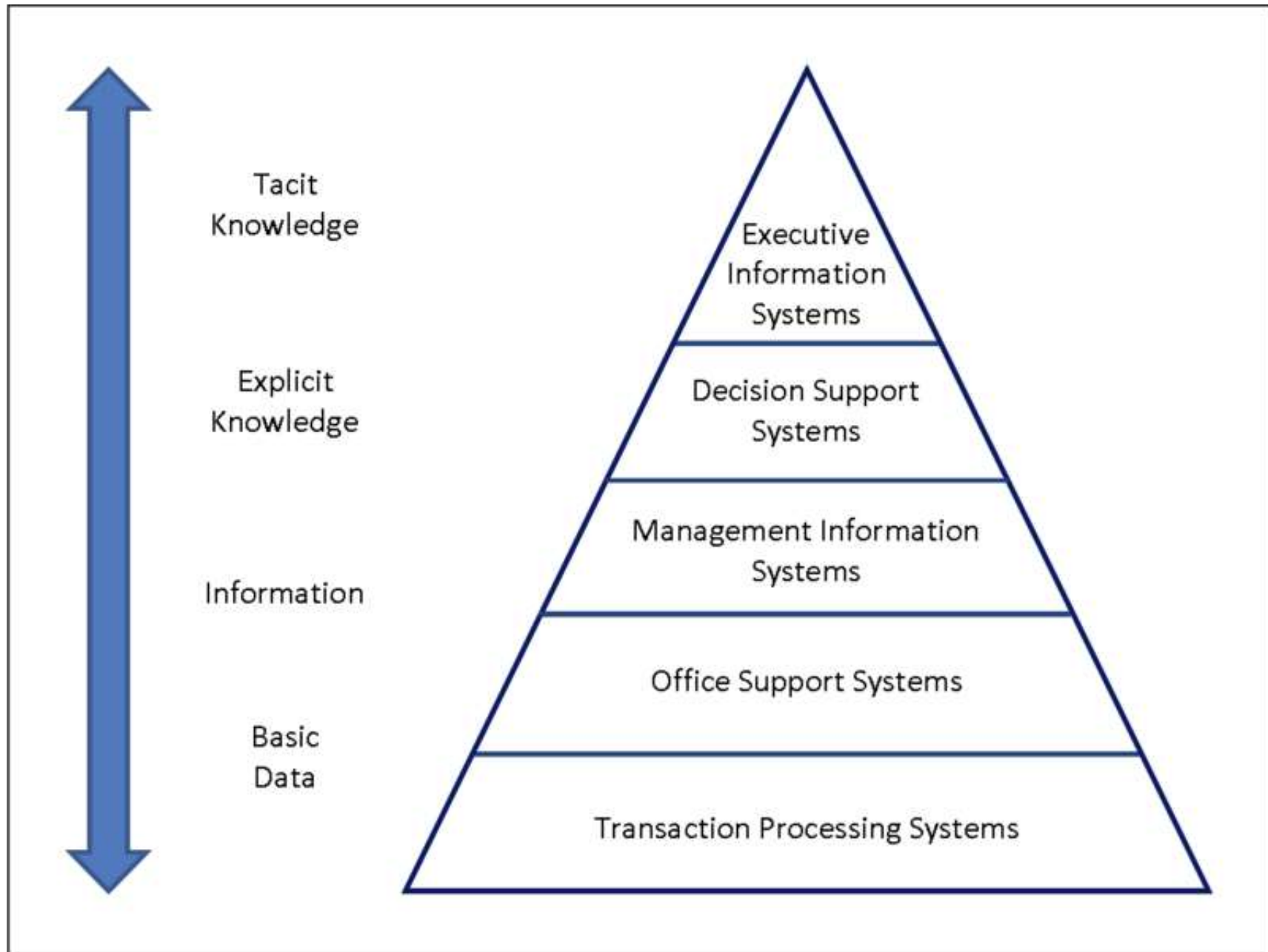
- An introduction to Information System
- Types of Information System
- Meaning of Management Information System
 - Challenges of Managing the IT Functions
- Evolution Of MIS
- Features of MIS
- Elements of MIS
- Output of MIS
 - MIS Objectives
- Benefits of MIS

Information System

An information system is an organized combination of people, hardware, software, communications Networks and data resources that collects, transforms, and disseminates information in an organization.

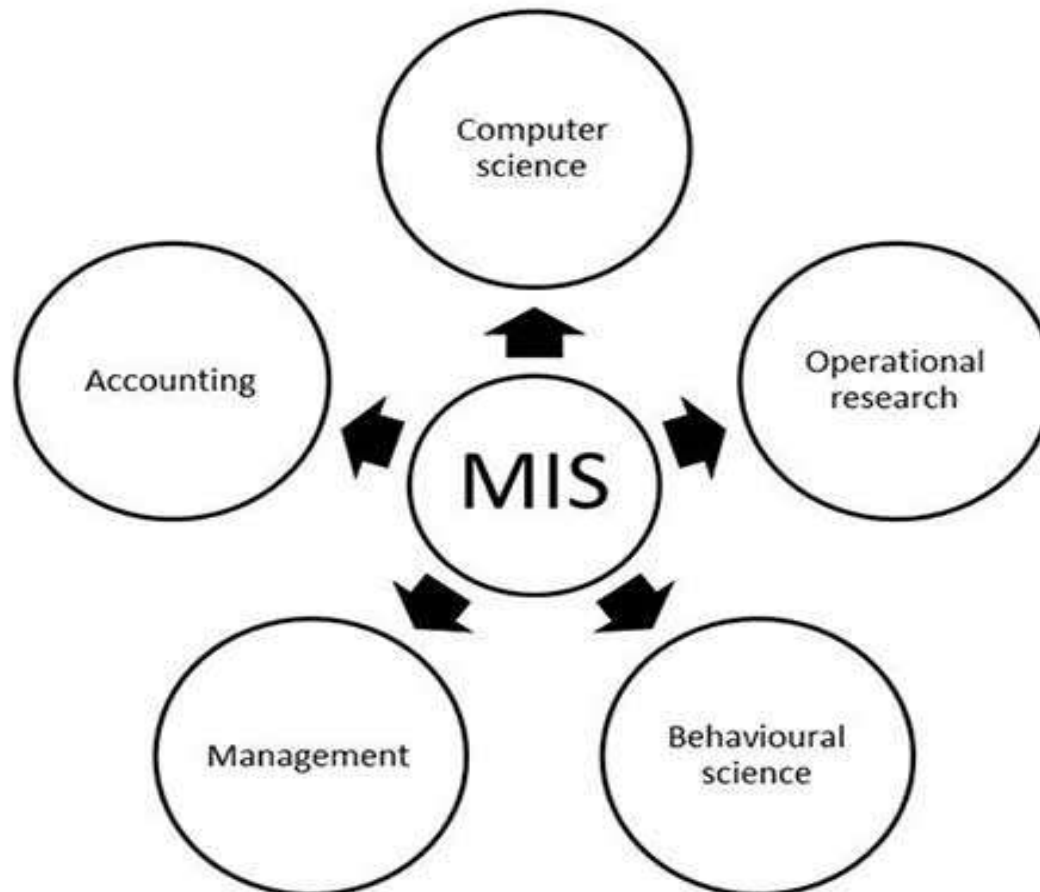


Types of Information System



Management Information System

MIS is the use of information technology, people, and business processes to record, store and process data to produce information that decision makers can use to make day to day decisions.



Challenges of Managing the IT Functions

- **Modern IT Environment**

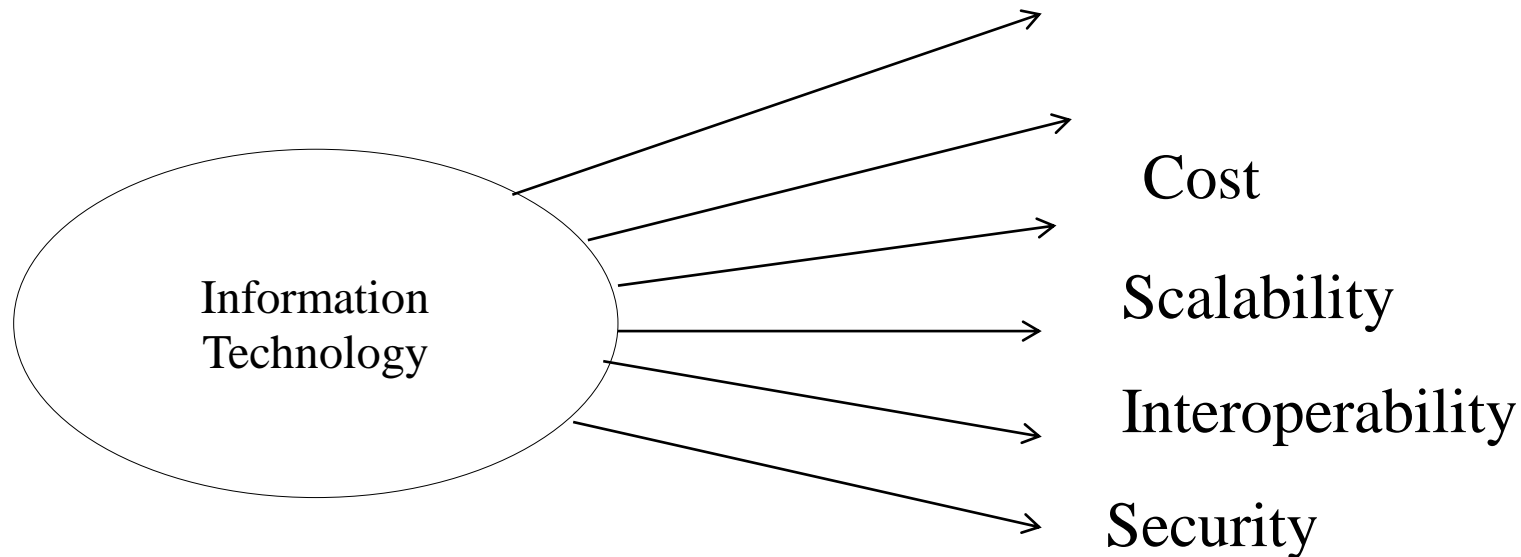
- - First Order: Increased speed/efficiency
- - Second Order: Restructuring of organization
- re-training of workers
- - Third Order: Restructuring of industry

- **Centralisation Vs Decentralisation**

- - Centralized IT Management
- - Decentralized IT Management
- - Standardisation
- - Vendors
- - Innovation

Continue...

- IT Security
 - - External Threats: malware, Human Threat, Phishing
 - - Internal Threats
 - - Managing Security: Authentication,
- Technology Selection

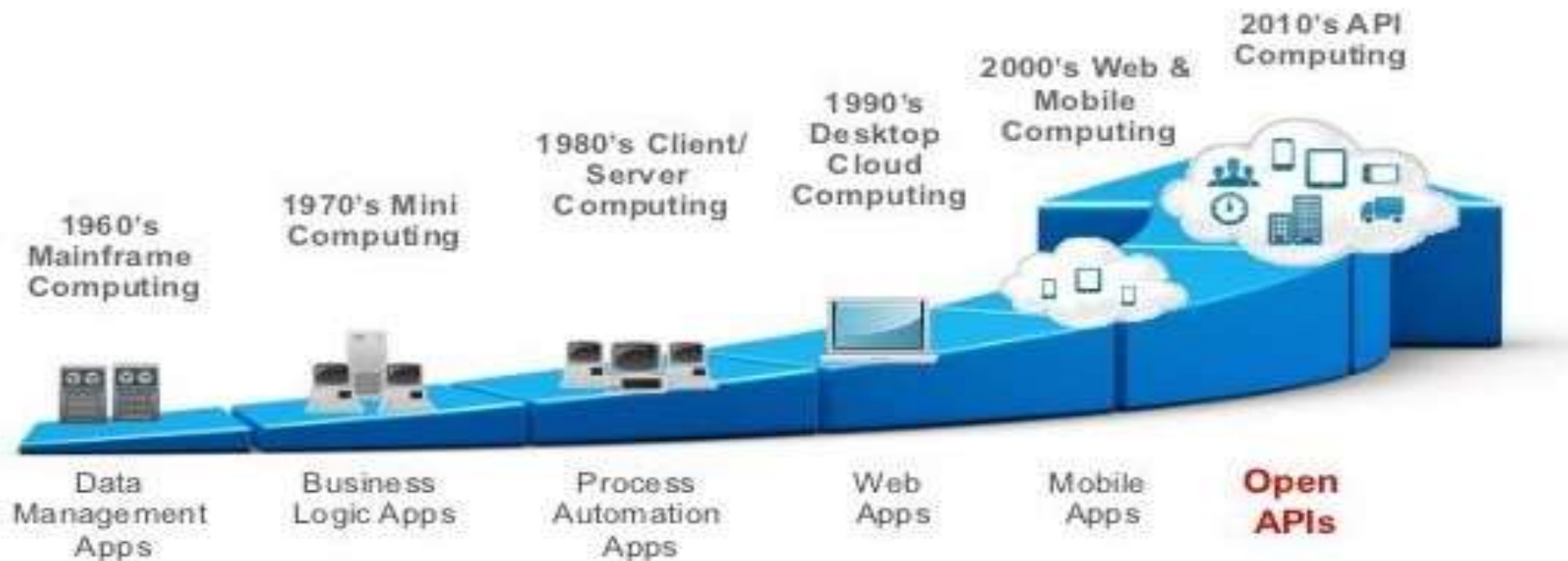


Continue...

- Vendor Management
 - - Vendor Selection
 - - Vendor Contracts
 - - Ongoing Relationship Management
 - - Vendor Retention or Termination
- Role of The CIO
 - - Information System Plan
 - - Vendor Coordination
 - - Technology Updates
 - - Return on Investment of Technology

Evolution Of MIS

- Mainframe and Minicomputer Computing
- personal Computers
- Client Server Networking
- Enterprises Computing
- Cloud Computing



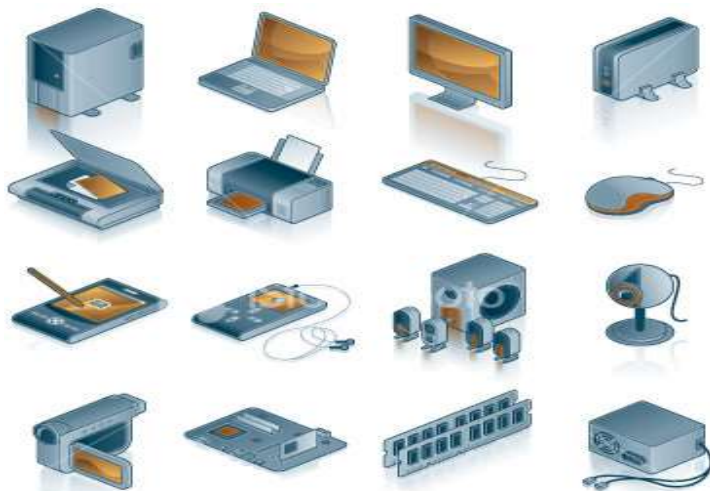
Features of MIS

- Timeliness
- Accuracy
- Consistency
- Completeness
- Relevance

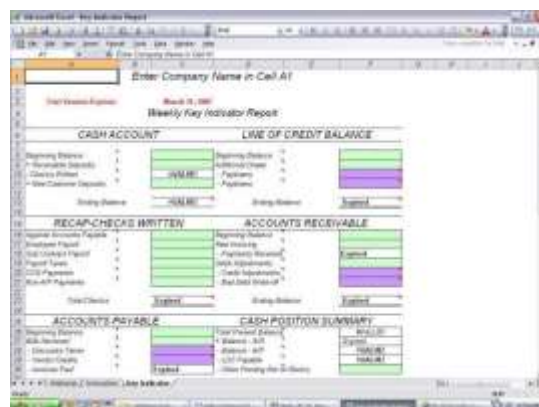


Elements of MIS

- Hardware
- Software
- Control
- Databases and application programs
- People
- Telecommunications and Networks



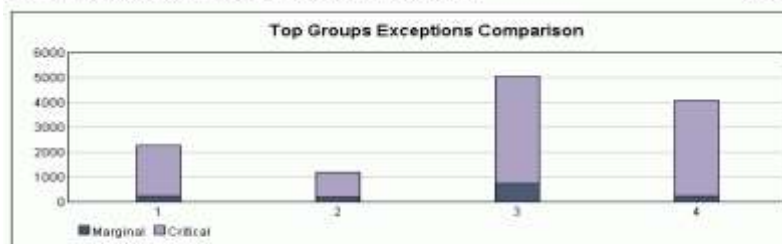
The screenshot displays the NetBackup Administration Console interface. The left-hand pane contains a tree view of system reports, including Client Information, System Activity Log, and Disk Space. The right-hand pane shows the details for the 'Network Health Score' report, which indicates a score of 98%. Below this, other reports are visible, such as 'Operating System' (Windows Server 2008), 'Patch Status' (100% up-to-date), and 'Alarm Health Status' (All Alarms OK). The interface uses a blue and white color scheme with various icons and progress bars to represent system health.



Daily Sales by Sales Rep Summary Report	
Prepared: 03/08/2012	
Sales Rep ID	Amount
CAR	Rs.42,345
GWA	Rs.38,950
SAK	Rs.22,100
JWN	Rs.12,350

Quarterly Application Exception Report for Top Groups

Q2 2003



Label ▲	Group	Marginal Exceptions	Critical Exceptions	Total Exceptions	Average Daily Traffic Class Count
1	Dev.net.Compression.Snappers	267	2,042	2,309	162
2	GroupA	229	1,000	1,229	147
3	GroupB	779	4,322	5,101	474
4	Prod.Compression.Snappers	291	3,855	4,146	381

MIS Objectives

- To provide information for planning, organizing and controlling purposes
- To store and manage data efficiently from all the functional areas of the business.
- To provide information quickly as and when required
- To reduce the risk and uncertainties in the managerial decision-making.
- To speed up the execution of the results with the reliable data available.
- To provide the information regarding the financial health of the business organization.

Benefits of MIS

- Companies are able to identify their strengths and weaknesses due to the presence of revenue reports, employees' performance record etc. Identifying these aspects can help a company improve its business processes and operations.
- Giving an overall picture of the company.
- Acting as a communication and planning tool.
- The availability of customer data and feedback can help the company to align its business processes according to the needs of its customers. The effective management of customer data can help the company to perform direct marketing and promotion activities.
- MIS can help a company gain a competitive advantage.
- MIS reports can help with decision-making as well as reduce downtime for actionable items.

Ethical and Social Issues

- Ethics:
- Ethics are publicly accepted rules of behaviour for social engagement.
- Principles of right and wrong that individuals, acting as free moral agents, use to make choices to guide their behavior.
- Information systems and ethics:
- Information systems raise new ethical questions because they create opportunities for:
- -> Intense social change, threatening existing distributions of power, money, rights, and obligations

Ethical Issues

1. Privacy

- Internet challenges to privacy

(Cookies,Spyware)

2. Workplace Monitoring

- Types of workspace monitoring

1. Use of digital video camera

2. Use of computer network logs

3. Scanning & storage of all outgoing as well as incoming e-mails

4. Use of employee i-card to monitor physical movement

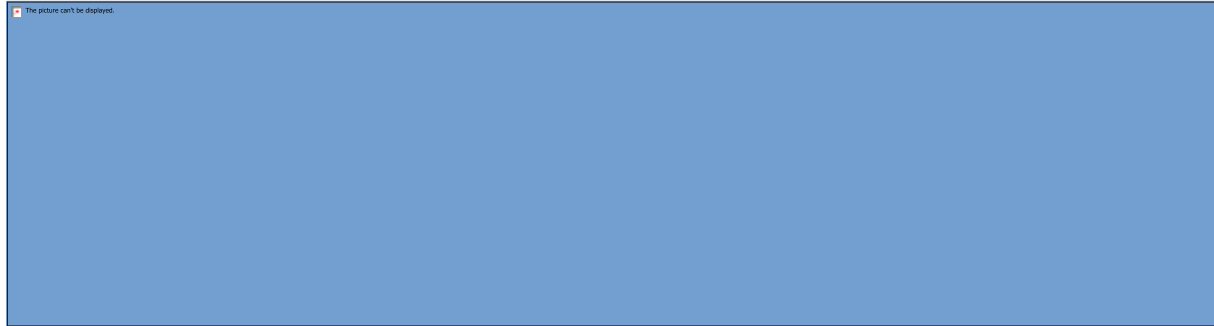
- The information Panopticon



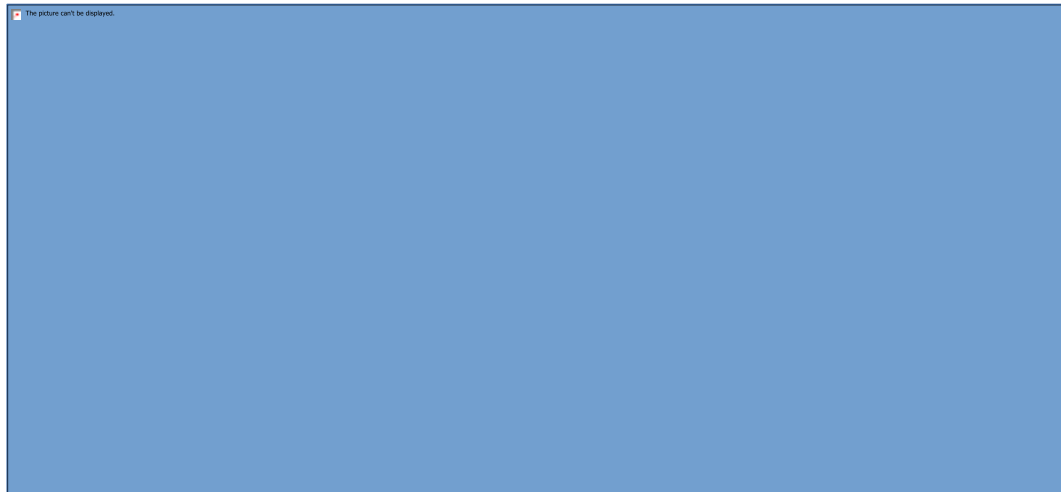
- The role of monitoring

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3. Power Over Users



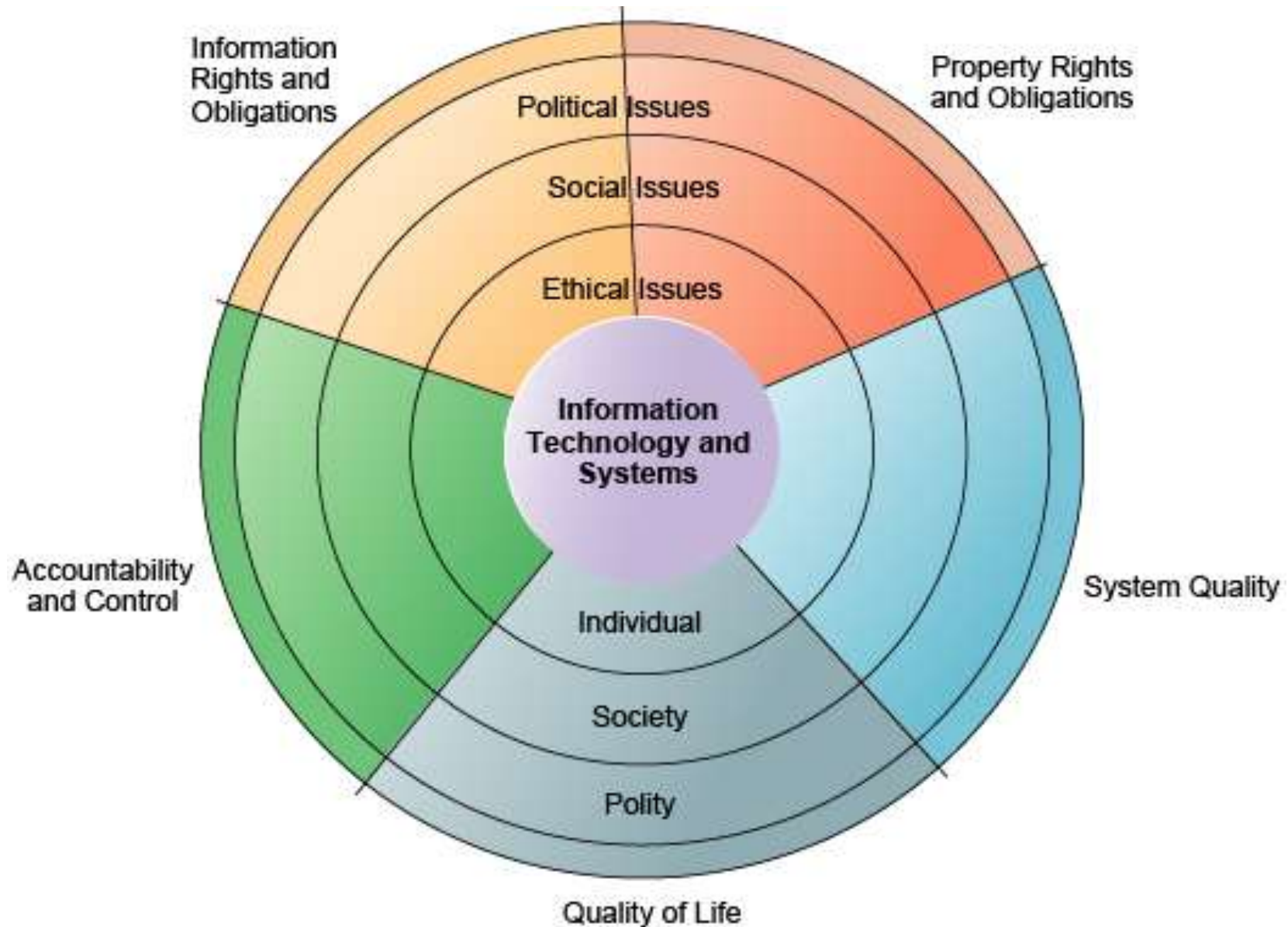
Exercise of power by systems professionals



Awareness of power exercise by users and systems professionals

Ethical and Social Issues Related to System

- Model for Ethical, Social, Political Issues



Continue...

- Five Moral Dimensions of Information Age

- 1) Information rights and obligations
- 2)- The rights that individuals & organizations have with respect to information that pertains to themselves.
- 3) Property rights and obligations
- 4)- The rights that individuals & organizations have with respect to property in digital society
- 5) Accountability and control
- 6)- The mechanisms for accessing responsibility for decisions made & action taken
- 7) System quality
- 8)- Standards of data & system quality that should protect individual rights & the safety of society

Continue...

- Basic Concepts for Ethical Analysis
- 1. Responsibility

Accepting the potential costs, duties, and obligations for decisions

2. Accountability

Mechanisms for identifying responsible parties

3. Liability

Permits individuals (and firms) to recover damages done to them

4. Due Process

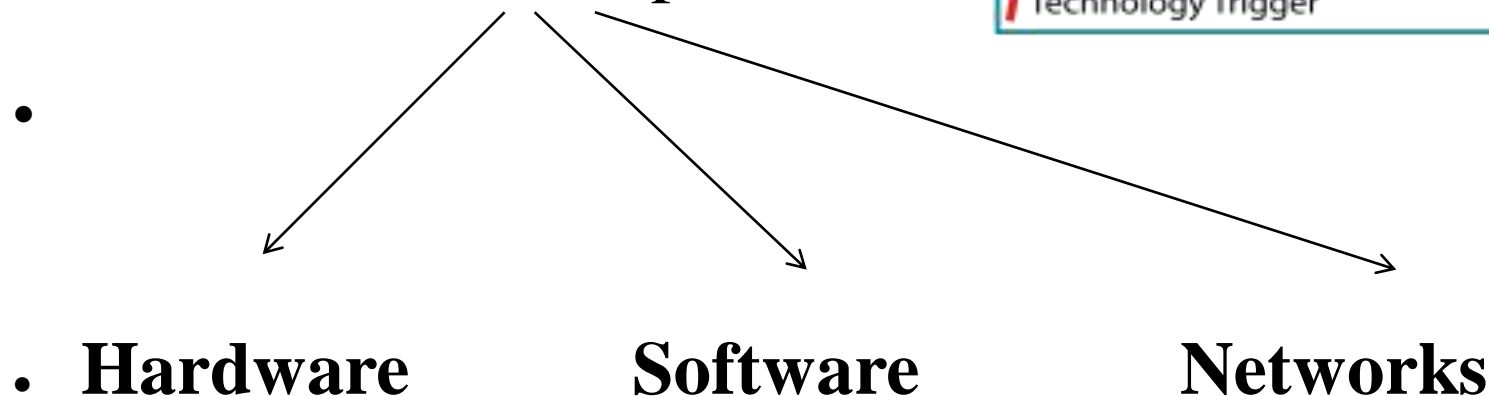
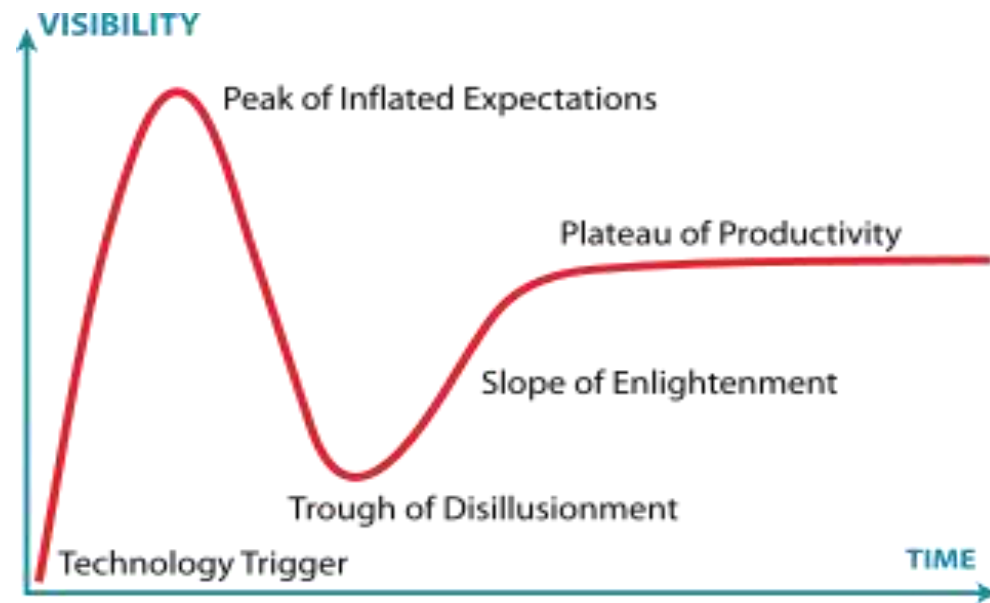
Laws are well known and understood, with an ability

Social Issues

- Workplace Behaviour & Health
 - - Resistance & Conformity
 - - Change in work practice
- DE-skilling & Alienation
- Telecommuting
- E-waste
 - -Managing E-waste

Information Technology Infrastructure & Choices

- What is the infrastructure?
- IT Infrastructure Decisions
 - - Business needs
 - - Technology issues
 - - The technology hype cycle
- Infrastructure Component



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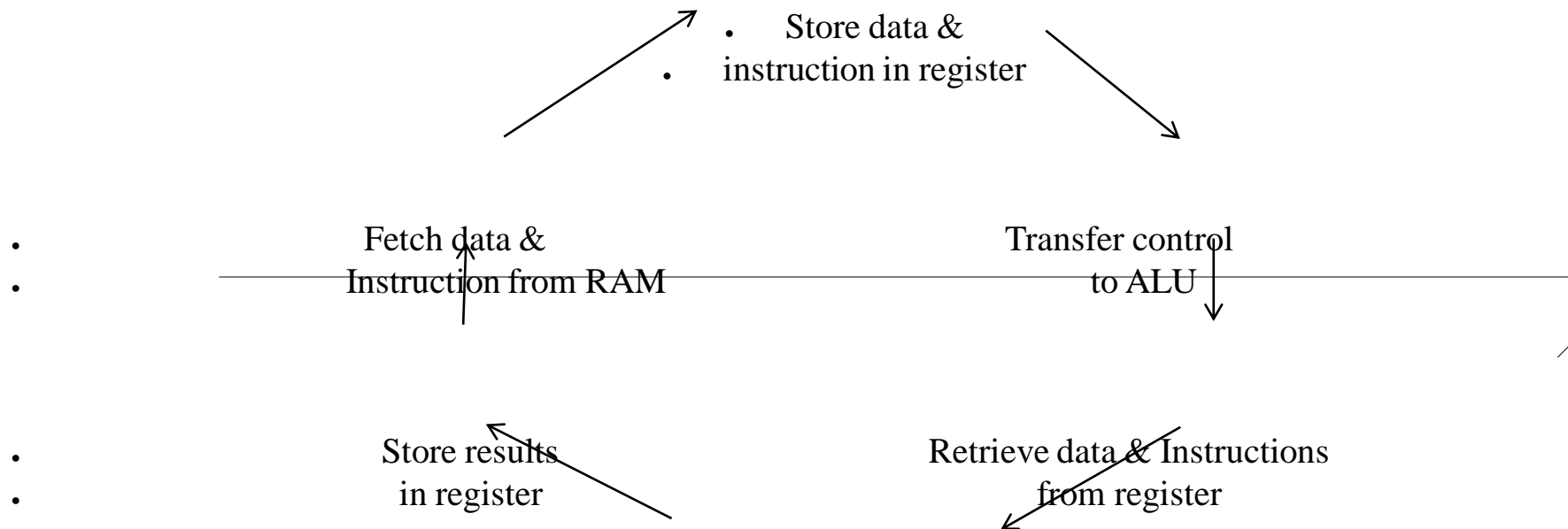
- Hardware

- **1. Processor**

- - Instruction Cycle

- - Execution Cycle

- **Instruction cycle**



- **Execution cycle**

Continue...

2. The Computer

- Desktop
- Laptop
- Servers

3. Random Access Memory

4. The Board & Bus

5. Secondary Storage

6. Peripherals

7. Hand-held Computers



Continue...

- **Software**

- - System Software (Operating System)

- Linux, Windows, MacOS, Solaris

- - Application Software

- Databases, Enterprise Software, Office Productivity, Utilities, Networking, Multimedia Software, Software Development, Games/Entertainment, Embedded Software

- **Networks**

- **Solutions**

- - Cloud Computing (salesforce.com)

Virtualisation

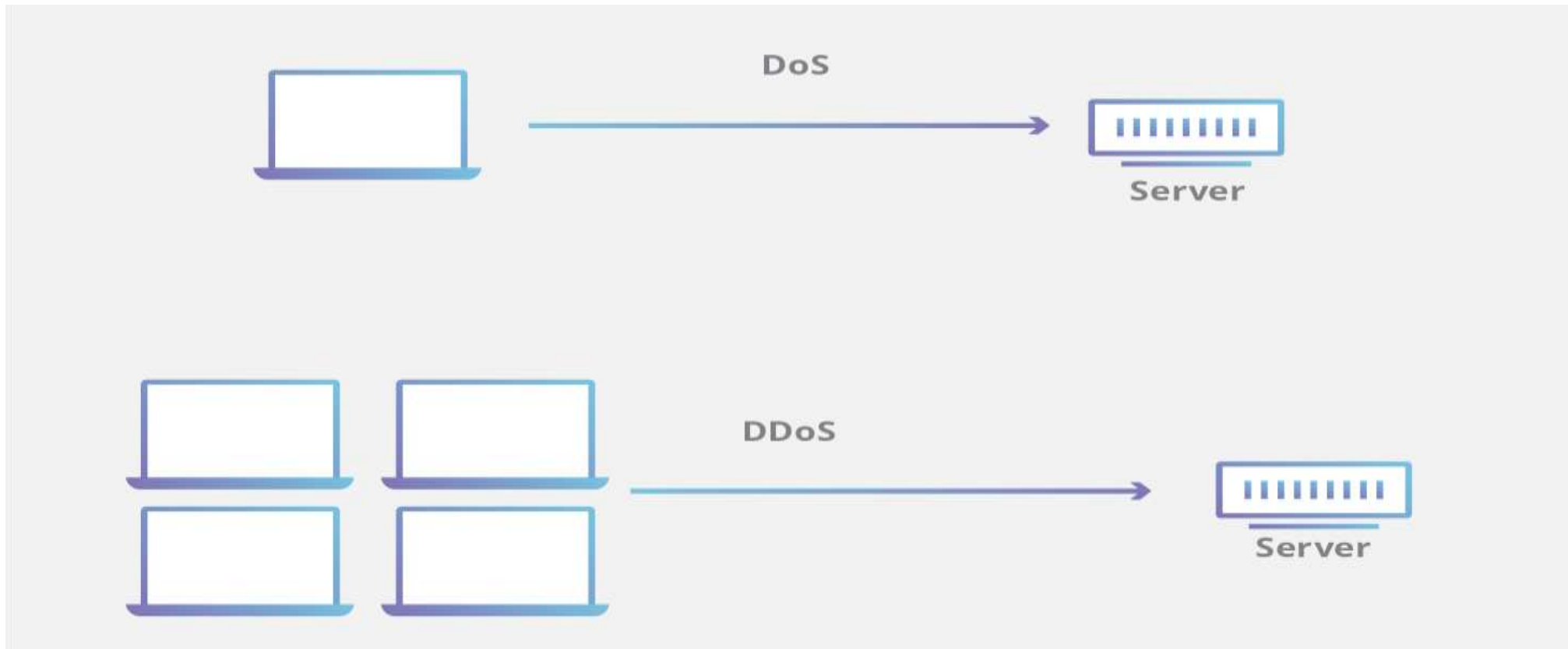
Information System Security & Control

- Threats to the organisation
 - - Malware (ILOVEYOU, Conficker Worm)
 - - Cracking & Espionage
 - - Phishing & Identity Theft



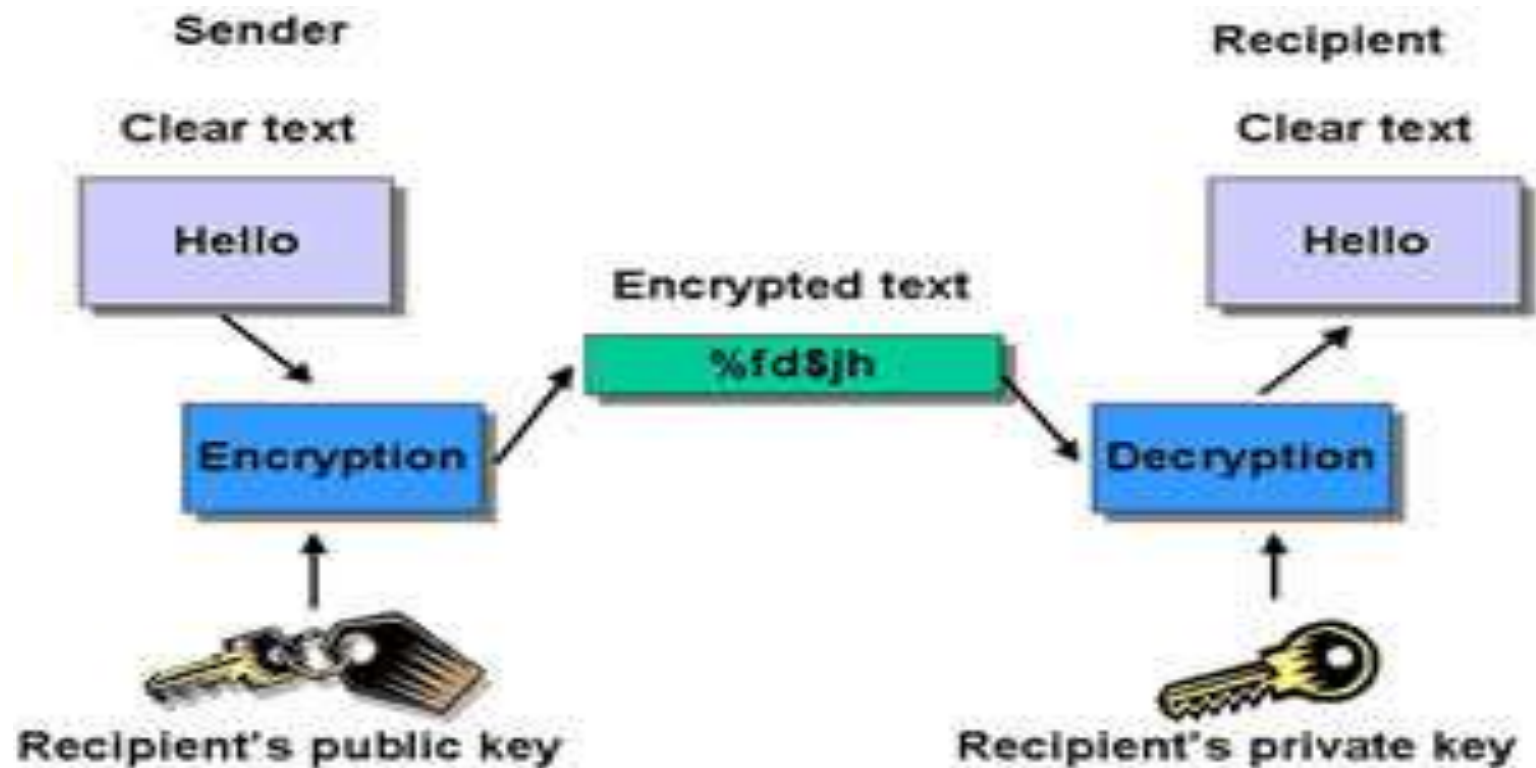
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- Denial-of-Service Attack
- Distributed DoS Attack



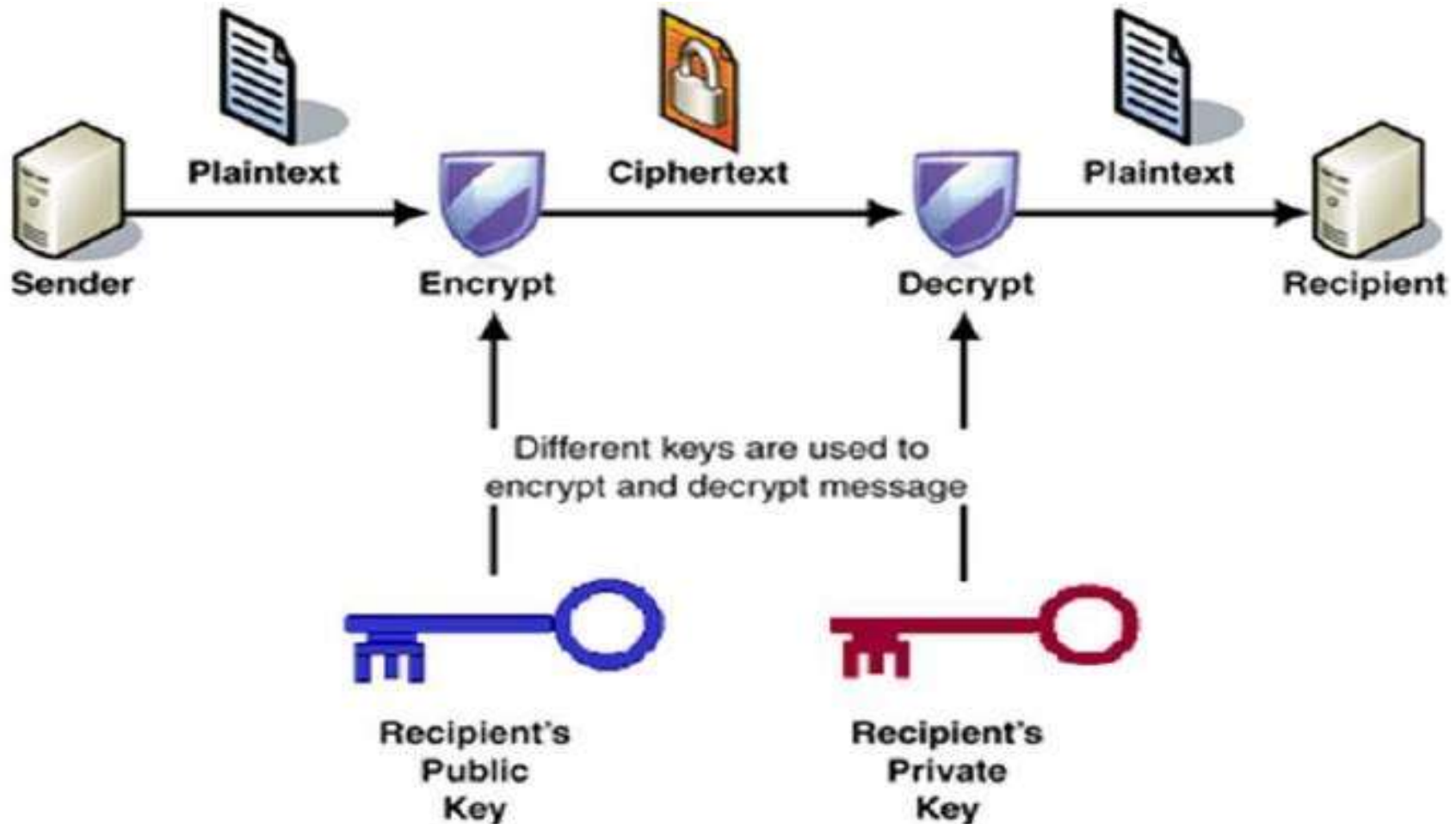
Continue...

- Technology for handling security
- - Encryption



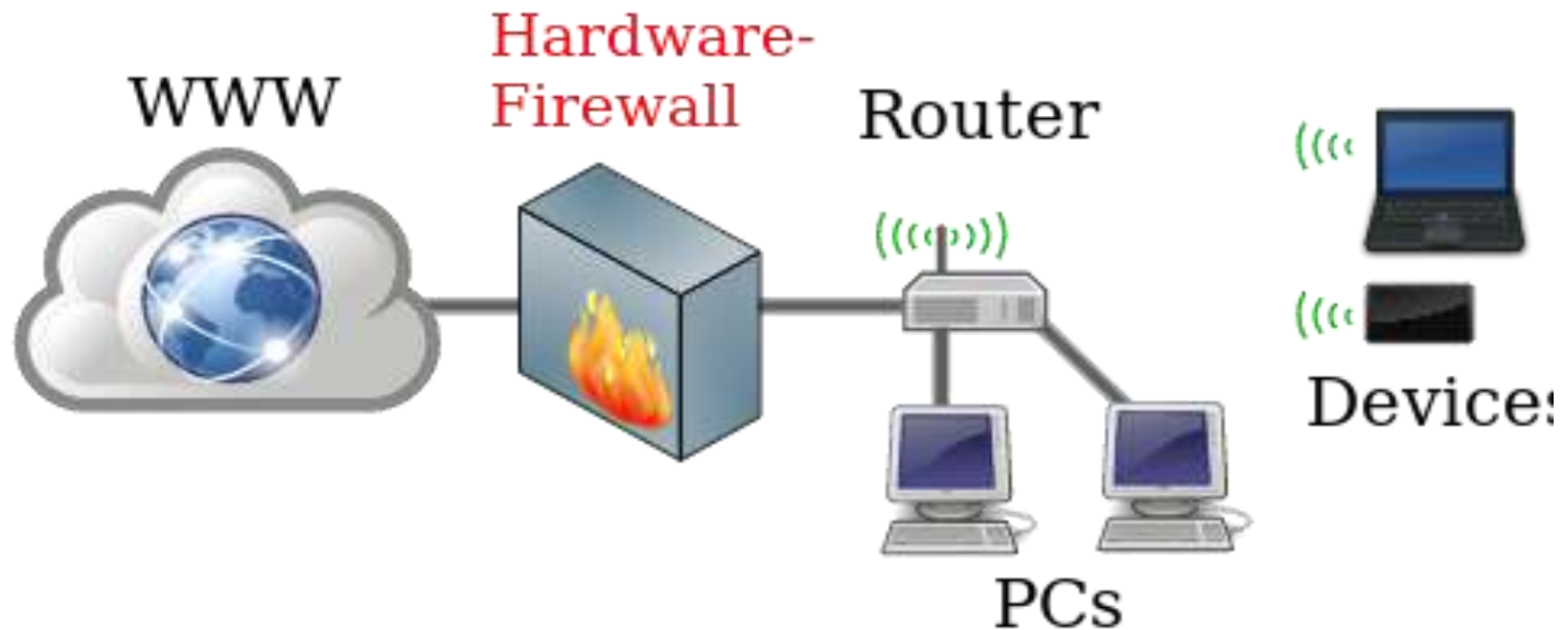
Continue...

- Public key cryptography



Continue...

- Firewall

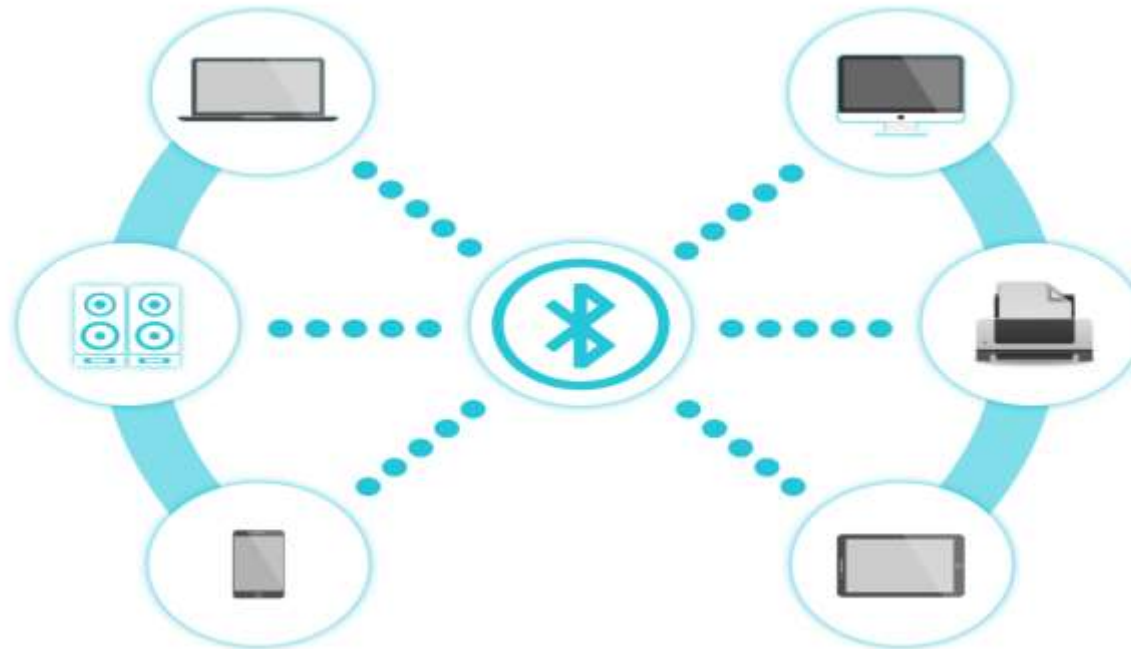


- Virtual Private Network

Continue...

- Wireless Technology

1. Wi-Fi Routers
2. Bluetooth
3. Blackberry
4. RFID
5. Wireless Sensor Networks



Continue...

• Managing Security

I. Confidentiality

II. Authentication

III. Message integrity

IV. Access & availability

V.-> Securing the Network

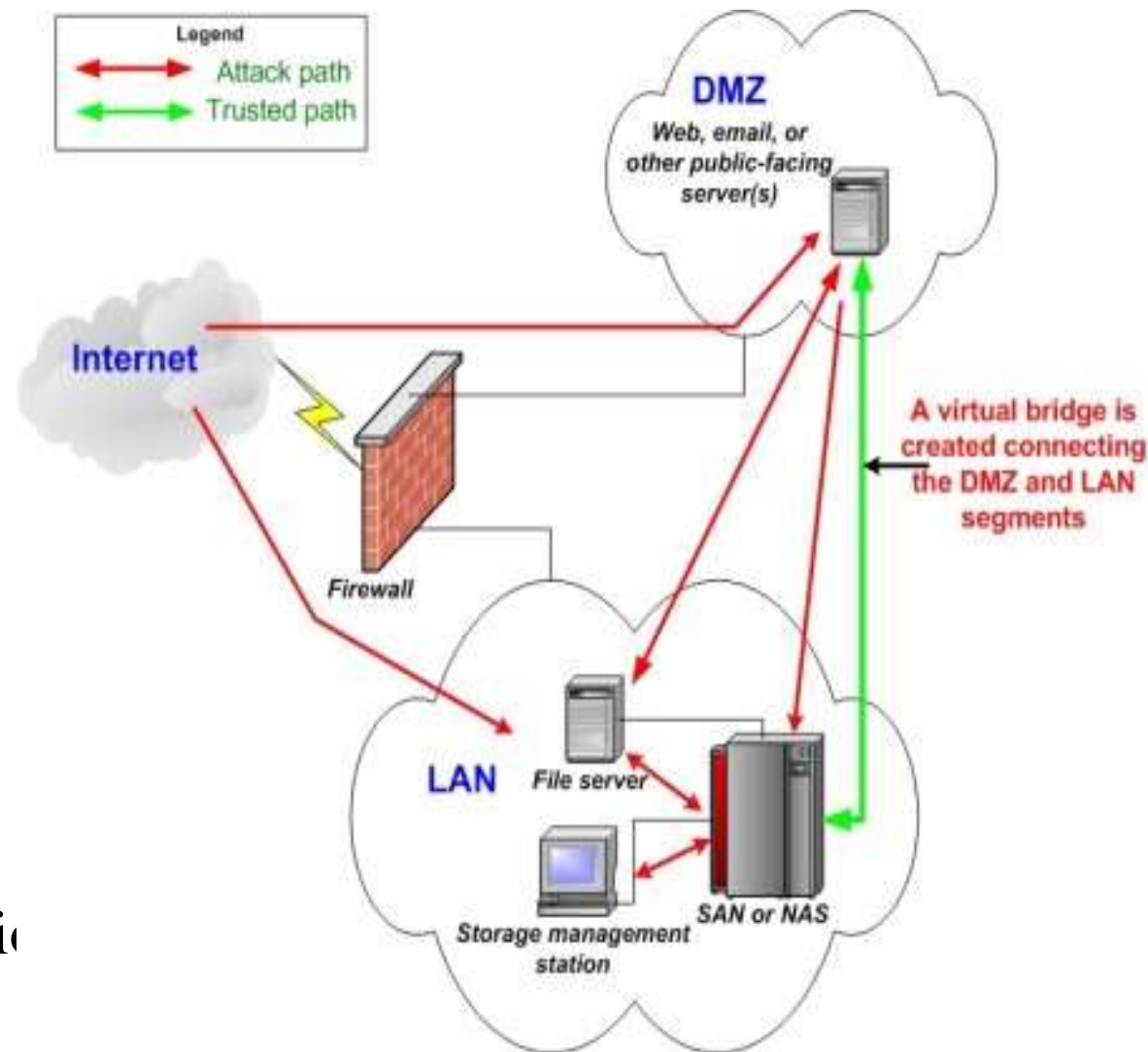
VI.1. Perimeter Security

VII.(Demilitarised Zone)

VIII.2. Two-Factor Authentication

IX.-> Securing the Client

X.1. Desktop Firewall



Continue...

- > Creating a Secure Environment**
- > Security Audit & Risk Assessment**
- > Disaster Recovery Planning**

Case Studies -Information Technology Infrastructure in a Bank



Software developer	Product	Lead Customers
Infosys	Finacle	ICICI Bank IDBI Bank
TCS	BANCS	SBI and Indian banks
I flex	Flex cube	HDFC bank

Continue...

- Finacle

- Features of Finacle:
 - (i) Finacle core banking solution is designed on a completely web based paradigm.
 - (ii) It is multi-currency CRM-enabled core banking solution
 - (iii) Based on open systems and is extensively parameterisable solution
 - (iv) It supports 24x7 operations,

Continue...

- **Functional overview**
- Finacle core banking solution offers comprehensive retail, corporate and trade finance features- all in a highly secure and reliable environment.
- **1. Retail banking**
- Finacle core banking solution supports product management and account management for the full range of retail banking products such as Savings, Current/Checking, Overdraft, Revolving overdraft, Term Deposits and all types of retail Loans [Personal Loans, Auto Loans and Mortgages].
- **2. Corporate banking**

Continue...

4. Common modules

Finacle offers extensive common modules which include support for Clearing (including electronic and RTGS), Standing Instructions, General Ledger, Signature display and management, document tracking, limits and collateral management, delinquency management and a whole range of day to day and year end reports. Finacle has the capability of interfacing with various payment gateways, Anti Money Laundering solutions, Regulatory reporting systems, Statement management and distribution systems and consolidation packages.

Continue...

- Information Technology Infrastructure in Manufacturing
- MIS in Educational System